

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows.

1.-59. (Cancelled)

60. (New) A plasma surface processing apparatus for processing a surface of a material to be processed with a processing gas plasmatized under an electric field, said apparatus having an electrode structure for generating said electric field, said electrode structure comprising:

a metallic electrode body; and

a dielectric case provided as a solid dielectric layer for said electrode body and including an integral case body which has an opening and an internal space in which said electrode body is received, a protrusive end part being provided on a side of said opening of said case body, said protrusive end part being protruded relative to said electrode body.

61. (New) An electrode structure according to claim 1, wherein said dielectric case further includes:

a lid made of a solid dielectric material for closing said opening, an end part of said lid covering an end surface of said protrusive end part in a location more forward in a direction where said protrusive end part is protruded relative to said electrode body.

62. (New) A plasma surface processing apparatus for processing a surface of a material to be processed with a processing gas plasmatized under an electric field, said apparatus having an electrode structure for generating said electric field, said electrode structure comprising:

an elongate metallic first electrode body;

a first dielectric case provided as a solid dielectric layer for said first electrode body and including an integral first case body which has a first opening and a first internal space in which said first electrode body is received, a first protrusive end part being provided on a side of said first opening of said first case body, said first protrusive end part being protruded relative to said first electrode body;

an elongate metallic second electrode extending in a same direction as said first electrode body; and

a second dielectric case provided as a solid dielectric layer for said second electrode body and including an integral second case body which has a second opening and a second internal space in which said second electrode body is received, a second protrusive end part being provided on a side of said second opening of said second case body, said second protrusive end part being protruded relative to said second electrode body,

said first dielectric case and said second dielectric case defining a gas passage in between, said gas passage allowing said processing gas to pass therethrough in a direction orthogonal to said direction in which said first electrode body and said second electrode body extend.

63. (New) An electrode structure according to claim 3, wherein said first dielectric case and said second dielectric case are separately formed.

64. (New) An electrode structure according to claim 4, wherein said first dielectric case has an opposing surface abutted with said second dielectric case, and said opposing surface is provided with a recess to serve as said gas passage.

65. (New) An electrode structure according to claim 3, wherein said first dielectric case and said second dielectric case are integrally connected to one another.

66. (New) An electrode structure according to claim 3, wherein flow passage sectional area of said gas passage varies along a direction of gas flow.

67. (New) An electrode structure according to claim 3, wherein said first dielectric case has a plate dividing said gas passage and said first internal space, and a thickness of said plate varies along a direction of gas flow in said gas passage.

68. (New) An electrode structure according to claim 3, wherein a distance between said first electrode body and said second electrode body varies along a direction of gas flow in said gas passage.

69. (New) An electrode structure according to claim 3, wherein said first dielectric case is provided with a gas uniformizing passage for dispersing said processing gas uniformly in a direction in which said first electrode body extends and for introducing said processing gas into said flow passage.